

**Amendments to the Drawings:**

The drawing sheets attached in connection with the above-identified application containing Figures 2 and 3 are being presented as new formal drawing sheets to be substituted for the previously submitted drawing sheets. Figures 2 and 3 have been amended as discussed in greater detail below. Appended to this amendment are annotated copies of the previous drawing sheets which have been marked to show changes presented in the replacement sheets of the drawings.

Figures 2 and 3 have been amended to show the air conditioning unit being arranged at a widthwise center of the vehicle 100 in the instrument panel 111 in front of a front seat 113 of the vehicle. Support for the amendments to the drawings can at least be found on page 6, lines 9-14 of the present specification. Thus, no new matter has been added.

**REMARKS**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

As a preliminary matter, Applicants note the Office Action's acknowledgement of Applicants claim for foreign priority under 35 U.S.C. § 119(a)-(d), receipt of all certified copies of the priority documents and consideration of the Information Disclosure Statements submitted on June 6, 2005 and January 29, 2004.

The drawings, abstract and claims 13, 15 and 18 stand objected to for minor informalities. Claims 1-7, 9, 11, 13, 15, and 18-20 stand rejected under 35 U.S.C. § 112, ¶ 2, as being indefinite. Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over European Publication No. EP 0816788A2 to Sasaki (hereinafter "Sasaki I") in view of Japanese Publication No. JP 10-19480 also to Sasaki (hereinafter "Sasaki II"). Claims 2-7, 9 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sasaki I in view of Sasaki II in further view of Swiss Publication No. CH 183144 to Hirsiger.

By this amendment, the abstract, drawings and claims have been amended to correct the minor informalities noted by the Examiner on pages 2-4 of the outstanding Office Action. In particular, the abstract has been amended to avoid run-on sentences, the claims have been amended to correct a misspelling and the drawings have been amended to depict features that were described textually in the specification. In addition, the specification has been amended to correspond to the changes made to the drawings by incorporating reference numerals for the newly depicted features. No new matter has been added. Applicants respectfully submit that the abstract, drawings and claims are now in proper form and respectfully request withdrawal of the objections.

Applicants would like to note that FIG. 8 should not be designated by the legend Prior Art as suggested in the Office Action. FIG. 8 depicts an embodiment of the present invention. In particular, FIG. 8 depicts a sectional view of a similar structure to the first embodiment of the present invention as shown in FIGS. 1-3 (see, page 10, lines 5-8). In particular, FIG. 8 illustrates a static pressure distribution in an air conditioning unit (similar to the air conditioning unit of the first embodiment of the present invention) compared with the

static pressure distribution in an air conditioning unit according to a fourth embodiment of the present invention as illustrated in FIG. 7. Thus, FIG. 8 illustrates more than that which is old. Withdrawal of the objection to FIG. 8 is respectfully requested.

The claims have been amended to address the concerns raised by the Examiner on pages 4-6 of the Office Action. In particular, the claims have been amended to remove any ambiguity that may have existed in the claims. Applicants respectfully submit that the claims are in full compliance with the requirements set forth by 35 U.S.C. § 112, ¶ 2 and respectfully request withdrawal of the rejections. Claims 1, 4, 9, 11, 13 and 18-20 have been amended to further define the subject matter Applicants regard as the invention. Claim 3 has been amended to update its dependence and new claims 21-24 have been added. Claims 2, 5-7 and 15 remain unchanged in the application.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier. After amending the claims as set forth above, claims 1-7, 9, 11, 13, 15 and 18-24 are presenting in this application for consideration.

Applicants respectfully submit that each of the independent claims is patentably distinguishable over the cited references as required by § 103. Applicants further submit that none of the cited references, whether considered alone or in combination, discloses Applicants' claimed air conditioning unit and a vehicle comprising an air conditioning system including *a U-shaped outer air flow path provided on an outer side of the U-shaped evaporator in the air conditioning casing* as required by amended independent claims 1 and 19 and new independent claim 24. By contrast, the cited references fail to disclose, teach or suggest this claimed feature. Accordingly, independent claims 1, 19 and 24 and claims dependent therefrom are patentably distinguishable over the cited references. This distinction will be further described below.

**THE CLAIMS DISTINGUISH OVER THE CITED REFERENCES**

In the Office Action, claim 1 stands rejected as being unpatentable over the combination of Sasaki I and Sasaki II and claims 2-7, 9 and 11 stand rejected as being unpatentable over the combination of Sasaki I, Sasaki II and Hirsiger. In response, Applicants respectfully traverse these rejections, relying on MPEP § 2143, which states that:

[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

It is respectfully submitted that at least the first and third criteria of MPEP § 2143 have not been met in the Office Action.

**The Cited References Do Not Suggest All Claim Recitations**

Even if the first requirement of MPEP § 2143 was satisfied in the Office Action (which it is not, as explained below), the cited references still do not meet the third requirement, which is that “the prior art reference (or references when combined) must teach or suggest all the claim limitations.”

Embodiments of the present invention are directed to an air conditioning unit and a vehicle comprising an air conditioning system. The air conditioning unit includes an air conditioning casing, a fan unit, an evaporator, an inner air flow path and a heater. The air conditioning casing is formed with an inlet and an outlet. The fan unit is configured to make an air flow from the inlet to the outlet in the air conditioning casing. The evaporator is arranged in the air conditioning casing and has a substantially U-shape. The inner air flow path is provided on an inner side of the U-shaped evaporator in the air conditioning casing and is provided on one of an upstream side and a downstream side of the air flow from the U-shaped evaporator. The heater core is arranged on the downstream side of the air flow from the U-shaped evaporator.

According to one embodiment of the present invention as now recited in amended independent claims 1 and 19, *the U-shaped outer air flow path [is] provided on an outer*

*side of the U-shaped evaporator in the air conditioning casing.* With this arrangement, air can be constantly supplied to the entire surface of the evaporator. An exemplary embodiment of the present invention is illustrated in FIG. 3 and described on page 4, line 14 through page 5, line 2 of the present specification which shows the outer flow path consisting of a center path 11 on the outer side of the center evaporator 51 and side paths 12 and 13 on the outer sides of the evaporators 52 and 53 with the outer flow path having a substantially U-shaped space in a plan view.

The primary reference of Sasaki is directed to a multi-tube heat exchanger and air conditioner. As illustrated in FIG. 9, the air conditioner 87 includes a V-shaped heat exchanger 45 disposed in an air path 46 (column 9, lines 39-43). A heater 47 is disposed at a position downstream of the heat exchanger 45 and a damper 48 is disposed at a position upstream of the heater 47 for controlling the flow of air passing through the heater 47 (column 9, lines 50-53). In an alternative embodiment illustrated in FIG. 6, Sasaki I discloses a multi-tube heat exchanger 84 having a pair of semicircular tanks 31 and 32 with a plurality of heat transfer tubes 3 fluidly interconnected there between (column 7, lines 10-15).

The Office Action correctly recognizes that Sasaki I does not disclose the claimed U-shaped evaporator in the air conditioning unit. The Office Action then relies on the Sasaki II reference to cure this deficiency. As a preliminary matter, Applicants would like to point out that Sasaki I also fails to disclose the claimed feature of the *U-shaped outer air flow path provided on an outer side of the U-shaped evaporator in the air conditioning casing* as now required by amended independent claims 1 and 19. There is nothing in the Sasaki I reference that teaches or remotely suggests this claimed feature.

The Sasaki II reference also fails to disclose this claimed feature. As stated above, this reference was relied upon for allegedly disclosing the claimed U-shaped evaporator provided in the air conditioning unit. This reference, however, cannot remedy the deficiencies of the Sasaki I reference. The Hirsiger reference was cited for various features recited in the dependent claims. Applicants respectfully submit that Hirsiger can not cure the deficiencies of the combination of Sasaki I and Sasaki II. Thus, for this reason alone independent claims 1 and 19 are allowable. Claims dependent from allowable independent

claims 1 and 19 are allowable by virtue of their direct or indirect dependence from allowable claims 1 and 19 and for containing other patentable features.

In sum, even if the first requirement of MPEP § 2143 is satisfied, the third requirement of MPEP § 2143 is not satisfied in the Office Action, since the cited references do not teach each and every element of the present invention. Thus, the present claims are allowable.

Lack of Suggestion or Motivation to Modify or Combine the References

The Office Action does not identify where the prior art suggests the desirability of the claimed invention. MPEP § 2143.01, entitled *Suggestion or Motivation to Modify the References*, states that the “prior art *must* suggest the desirability of the claimed invention.” (emphasis added; citations omitted) It further states that obviousness

“can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. ‘The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.’”

(Citations omitted.) It is respectfully submitted that the Office Action does not provide a sufficient rationale as to why one of ordinary skill in the art would have been motivated to modify the Sasaki I reference, and thus a *prima facie* case of obviousness has not been established.

True, for the Sasaki I reference, the Office Action states that:

“Thus, it would have been obvious to one skilled in the art at the time of the invention to modify the vehicular air conditioning unit 87 of . . . [Sasaki I] by replacing the V-shaped evaporator 45 with a U-shaped evaporator as taught by Figure 8 of . . . [Sasaki II] in order to minimize the dead space between the evaporator and the air conditioning casting duct wall and thus more effectively utilize the space within the air conditioning casing...”

(Office Action, page 7, second full paragraph). Applicants respectfully submit that the *result* (“to minimize the dead space between the evaporator and the air conditioning casting duct

wall”) is not the same as *a reason why* one of ordinary skill in the art would be motivated to combine the references, however desirable those results may be.

So, if motivation to combine references to establish a *prima facie* case of obviousness could merely be satisfied by a result-oriented analysis of the prior art, the first requirement (and second requirement) of MPEP § 2143.01 would be completely vitiated. That is, by identifying references that teach each individual element of a claimed invention, implementation of the teachings of the cited references almost always necessarily provides results according to a given invention under examination. Indeed, such an analysis relies on impermissible circular reasoning. Thus, a *prima facie* case of obviousness has not been established in the Office Action.

In contrast to the result-oriented analysis proffered in the Office Action, the MPEP specifically states that “the prior art must suggest the desirability of the claimed invention.” The Office Action, in relying only on results, does not identify where the prior art suggests the desirability of the air conditioning unit and the vehicle including an air conditions system as recited above.

In summary, because of the lack of suggestion or motivation in the prior art to modify the reference, the first requirement of MPEP § 2143 has not been met and, hence, a *prima facie* case of obviousness has not been established.

Applicant respectfully submits that independent claims 1 and 19 are patentably distinguishable over the cited references and thus, allowable. Moreover, since independent claims 1 and 19 are allowable, claims dependent therefrom, namely claims 2-7, 9, 11, 13, 15, 18 and 20 are also allowable by virtue of their direct or indirect dependence from allowable independent claims 1 and 19 and for containing other patentable features. Further remarks regarding the asserted relationship between any of the claims and the cited references are not necessary in view of their allowability. Applicants’ silence as to the Office Action’s comments is not indicative of being in acquiescence to the stated grounds of rejection.

#### **NEW CLAIMS 21-24**

Applicants respectfully submit that new independent claim 24 is similar in scope to independent claim 1 and contains the same patentable feature discussed above. Thus, for substantially the same reasons advanced above with respect to independent claim 1, new

independent claim 24 is allowable. New dependent claims 21-23 depend directly or indirectly from allowable independent claim 19 and thus are also allowable.

**REJOINDER OF CLAIMS 8, 10, 12, 14, 16 AND 17**

Claims 8, 10, 12, 14, 16 and 17 stand withdrawn. Applicants note that these claims depend either directly or ultimately from independent claim 1. Applicants therefore respectfully request that these claims be rejoined and allowed due to their dependency from allowable claim 1. Applicants respectfully submit that no significant burden is placed on the PTO by rejoining and examining these claims. Indeed, such action is concomitant with the indication that "upon allowance of a generic claim, applicants will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim." (*See* 37 C.F.R. § 1.141(a).)

**CONCLUSION**

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.



Respectfully submitted,

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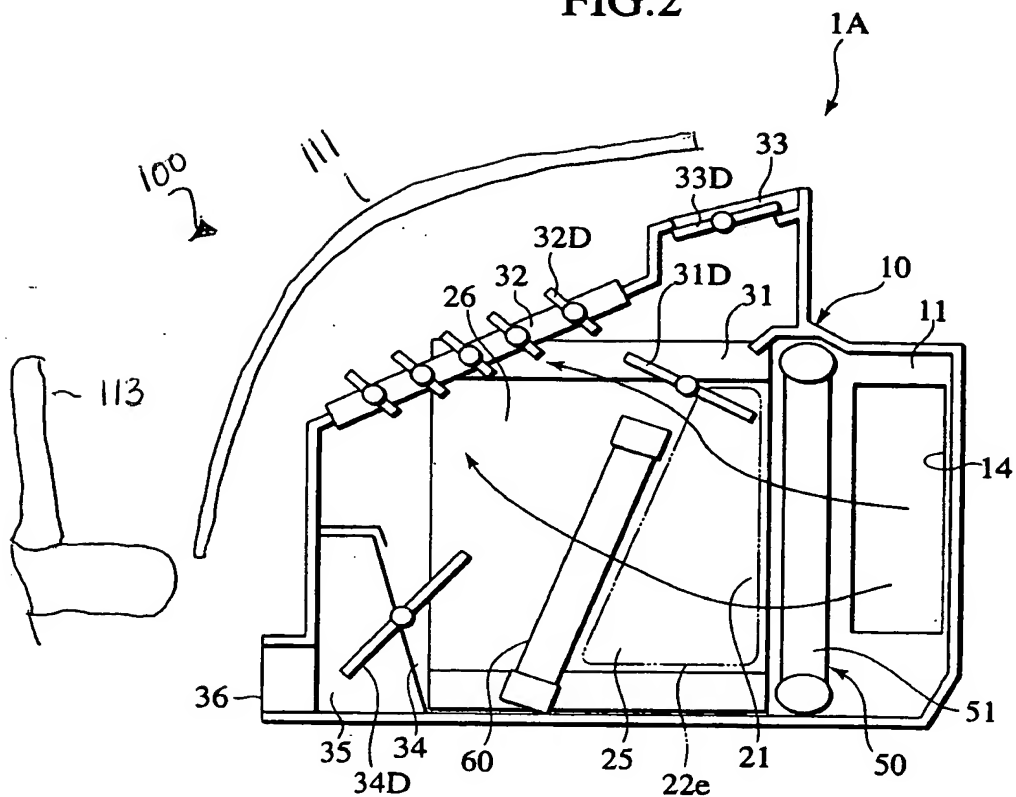
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ANNOTATED SHEET



FIG.2



ANNOTATED SHEET

FIG.3

